What is claimed is:

1. An image-processing method, comprising the steps of:

acquiring input image information from an image by means of one of various kinds of image inputting devices;

setting a subject pattern including one or more constituent elements from said input image information;

applying a multi-resolution conversion processing to said input image information;

detecting said constituent elements by employing a decomposed image of a suitable resolution level determined with respect to each of said constituent elements; and

extracting said subject pattern from said input image information, based on said constituent elements detected in said detecting step.

2. The image-processing method of claim 1,

wherein said suitable resolution level is individually determined corresponding to said subject pattern.

3. The image-processing method of claim 1,

wherein said suitable resolution level is individually determined corresponding to size information of said subject pattern residing in said input image information.

4. The image-processing method of claim 1,

wherein said multi-resolution conversion processing is a Dyadic Wavelet transform.

5. The image-processing method of claim 1,

wherein said input image information represents a color image, and said constituent elements of said subject pattern are extracted from said input image information by employing a signal value corresponding to a specific color coordinate within a color space, which is determined corresponding to said constituent elements.

6. An image-processing method, comprising the steps of:

acquiring input image information from an image by means of one of various kinds of image inputting devices;

setting a subject pattern including one or more constituent elements from said input image information;

acquiring size information of said subject pattern residing in said input image information;

converting a resolution of said input image information, based on said size information, so as to acquire resolution-converted image information of said image;

applying a multi-resolution conversion processing to said resolution-converted image information;

detecting said constituent elements by employing a decomposed image of a suitable resolution level determined with respect to each of said constituent elements; and

extracting said subject pattern from said resolution-converted image information, based on said constituent elements detected in said detecting step.

7. The image-processing method of claim 6,

wherein said suitable resolution level and a resolution of said resolution-converted image information are individually determined corresponding to said subject pattern.

8. The image-processing method of claim 6,

wherein said multi-resolution conversion processing is a Dyadic Wavelet transform.

9. The image-processing method of claim 6,

wherein said input image information represents a color image, and said constituent elements of said subject pattern are extracted from said resolution-converted image information by employing a signal value corresponding to a specific color coordinate within a color space, which is determined corresponding to said constituent elements.

10. An image-processing apparatus, comprising:

an image information acquiring section to acquire input image information from an image by means of one of various kinds of image inputting devices;

a setting section to set a subject pattern including one or more constituent elements from said input image information acquired by said image information acquiring section;

a multi-resolution conversion processing section to apply a multi-resolution conversion processing to said input image information;

a detecting section to detect said constituent elements by employing a decomposed image of a suitable resolution level determined with respect to each of said constituent elements; and

an extracting section to extract said subject pattern from said input image information, based on said constituent elements detected by said detecting section.

11. The image-processing apparatus of claim 10,

wherein said suitable resolution level is individually determined corresponding to said subject pattern.

12. The image-processing apparatus of claim 10,

wherein said suitable resolution level is individually determined corresponding to size information of said subject pattern residing in said input image information.

13. The image-processing apparatus of claim 10,

wherein said multi-resolution conversion processing is a Dyadic Wavelet transform.

14. The image-processing apparatus of claim 10,

wherein said input image information represents a color image, and said constituent elements of said subject pattern are extracted from said input image information by employing a signal value corresponding to a specific color coordinate

within a color space, which is determined corresponding to said constituent elements.

15. An image-processing apparatus, comprising:

an image information acquiring section to acquire input image information from an image by means of one of various kinds of image inputting devices;

a setting section to set a subject pattern including one or more constituent elements from said input image information acquired by said image information acquiring section;

a size information acquiring section to acquire size information of said subject pattern residing in said input image information;

a resolution converting section to convert a resolution of said input image information, based on said size information acquired by said size information acquiring section, so as to acquire resolution-converted image information of said image;

a multi-resolution conversion processing section to apply a multi-resolution conversion processing to said resolution-converted image information;

a detecting section to detect said constituent elements by employing a decomposed image of a suitable resolution level determined with respect to each of said constituent elements; and

an extracting section to extract said subject pattern from said resolution-converted image information, based on said constituent elements detected by said detecting section.

16. The image-processing apparatus of claim 15,

wherein said suitable resolution level and a resolution of said resolution-converted image information are individually determined corresponding to said subject pattern.

17. The image-processing apparatus of claim 15,

wherein said multi-resolution conversion processing is a Dyadic Wavelet transform.

18. The image-processing apparatus of claim 15,

wherein said input image information represents a color image, and said constituent elements of said subject pattern are extracted from said resolution-converted image information by employing a signal value corresponding to a

specific color coordinate within a color space, which is determined corresponding to said constituent elements.

19. A computer program for executing image-processing operations, comprising the functional steps of:

acquiring input image information from an image by means of one of various kinds of image inputting devices;

setting a subject pattern including one or more constituent elements from said input image information;

applying a multi-resolution conversion processing to said input image information;

detecting said constituent elements by employing a decomposed image of a suitable resolution level determined with respect to each of said constituent elements; and

extracting said subject pattern from said input image information, based on said constituent elements detected in said detecting step.

20. The computer program of claim 19,

wherein said suitable resolution level is individually determined corresponding to said subject pattern.

21. The computer program of claim 19,

wherein said suitable resolution level is individually determined corresponding to size information of said subject pattern residing in said input image information.

22. The computer program of claim 19,

wherein said multi-resolution conversion processing is a Dyadic Wavelet transform.

23. The computer program of claim 19,

wherein said input image information represents a color image, and said constituent elements of said subject pattern are extracted from said input image information by employing a signal value corresponding to a specific color coordinate within a color space, which is determined corresponding to said constituent elements.

24. A computer program for executing image-processing operations, comprising the functional steps of:

acquiring input image information from an image by means of one of various kinds of image inputting devices;

setting a subject pattern including one or more constituent elements from said input image information;

acquiring size information of said subject pattern residing in said input image information;

converting a resolution of said input image information, based on said size information, so as to acquire resolution-converted image information of said image;

applying a multi-resolution conversion processing to said resolution-converted image information;

detecting said constituent elements by employing a decomposed image of a suitable resolution level determined with respect to each of said constituent elements; and

extracting said subject pattern from said resolution-converted image information, based on said constituent elements detected in said detecting step.

25. The computer program of claim 24,

wherein said suitable resolution level and a resolution of said resolution-converted image information are individually determined corresponding to said subject pattern.

26. The computer program of claim 24,

wherein said multi-resolution conversion processing is a Dyadic Wavelet transform.

27. The image-processing program of claim 24,

wherein said input image information represents a color image, and said constituent elements of said subject pattern are extracted from said resolution-converted image information by employing a signal value corresponding to a specific color coordinate within a color space, which is determined corresponding to said constituent elements.

28. An image-processing method, comprising the steps of:

acquiring first image information at a predetermined first resolution from an image by means of one of various kinds of image inputting devices;

setting a subject pattern including one or more constituent elements from said first image information;

extracting information pertaining to said subject pattern from said first image information, in order to conduct an evaluation of said information;

establishing a second resolution based on a result of said evaluation conducted in said extracting step, so as to acquire second image information at said second resolution;

applying a multi-resolution conversion processing to said second image information;

detecting said constituent elements by employing a decomposed image of a suitable resolution level determined with respect to each of said constituent elements; and

extracting said subject pattern, based on said constituent elements detected in said detecting step.

29. An image-processing apparatus, comprising:

a first image-information acquiring section to acquire first image information at a predetermined first resolution from an image by means of one of various kinds of image inputting devices;

a setting section to set a subject pattern including one or more constituent elements from said first image information;

an information extracting section to extract information pertaining to said subject pattern from said first image information, in order to conduct an evaluation of said information;

a resolution establishing section to establish a second resolution based on a result of said evaluation conducted by said information extracting section, so as to acquire second image information at said second resolution;

a multi-resolution conversion processing section to apply a multi-resolution conversion processing to said second image information;

a detecting section to detect said constituent elements by employing a decomposed image of a suitable resolution level determined with respect to each of said constituent elements; and

an extracting section to extract said subject pattern, based on said constituent elements detected by said detecting section.

30. A computer program for executing image-processing operations, comprising the functional steps of:

acquiring first image information at a predetermined first resolution from an image by means of one of various kinds of image inputting devices;

setting a subject pattern including one or more constituent elements from said first image information;

extracting information pertaining to said subject pattern from said first image information, in order to conduct an evaluation of said information;

establishing a second resolution based on a result of said evaluation conducted in said extracting step, so as to acquire second image information at said second resolution;

applying a multi-resolution conversion processing to said second image information;

detecting said constituent elements by employing a decomposed image of a suitable resolution level determined with respect to each of said constituent elements; and

extracting said subject pattern, based on said constituent elements detected in said detecting step.

31. An image-processing method, comprising the steps of:

acquiring input image information from an image by means of one of various kinds of image inputting devices;

setting a subject pattern including one or more constituent elements from said input image information;

applying a multi-resolution conversion processing to said input image information, so as to acquire a decomposed image of a suitable resolution level determined with respect to each of said constituent elements;

conducting an operation for detecting said constituent elements by employing said decomposed image acquired in said

applying step, so as to specify said subject pattern based on a situation of detecting said constituent elements; and

applying a predetermined image-processing to at least one of said constituent elements detected in said conducting step.

32. The image-processing method of claim 31, precedent to said step of acquiring said input image information, further comprising the steps of:

acquiring prior image information at a predetermined first resolution from said image;

setting said subject pattern from said prior image information;

extracting information pertaining to said subject pattern from said prior image information, in order to conduct an evaluation of said information; and

establishing a second resolution based on a result of said evaluation conducted in said extracting step, so as to acquire said input image information at said second resolution.

33. An image-processing apparatus, comprising:

an image information acquiring section to acquire input image information from an image by means of one of various kinds of image inputting devices;

a setting section to set a subject pattern including one or more constituent elements from said input image information;

a multi-resolution conversion processing section to apply a multi-resolution conversion processing to said input image information, so as to acquire a decomposed image of a suitable resolution level determined with respect to each of said constituent elements;

a detecting section to conduct an operation for detecting said constituent elements by employing said decomposed image acquired by said multi-resolution conversion processing section, so as to specify said subject pattern based on a situation of detecting said constituent elements; and

an image-processing section to apply a predetermined image-processing to at least one of said constituent elements detected by said detecting section.

34. The image-processing apparatus of claim 33,

wherein, precedent to acquiring said input image information, said image information acquiring section acquires prior image information at a predetermined first resolution from said image, and said setting section sets said subject pattern from said prior image information; and further comprising:

an information extracting section to extract information pertaining to said subject pattern from said prior image information, in order to conduct an evaluation of said information; and

a resolution establishing section to establish a second resolution based on a result of said evaluation conducted by said information extracting section, so as to acquire said input image information at said second resolution.

35. A computer program for executing image-processing operations, comprising the functional steps of:

acquiring input image information from an image by means of one of various kinds of image inputting devices;

setting a subject pattern including one or more constituent elements from said input image information;

applying a multi-resolution conversion processing to said input image information, so as to acquire a decomposed

image of a suitable resolution level determined with respect to each of said constituent elements;

conducting an operation for detecting said constituent elements by employing said decomposed image acquired in said applying step, so as to specify said subject pattern based on a situation of detecting said constituent elements; and

applying a predetermined image-processing to at least one of said constituent elements detected in said conducting step.

36. The computer program of claim 35, precedent to said functional step of acquiring said input image information, further comprising the functional steps of:

acquiring prior image information at a predetermined first resolution from said image;

setting said subject pattern from said prior image information;

extracting information pertaining to said subject pattern from said prior image information, in order to conduct an evaluation of said information; and

establishing a second resolution based on a result of said evaluation conducted in said extracting step, so as to

acquire said input image information at said second resolution.

37. A method for conducting an image-compensation processing, comprising the steps of:

acquiring input image information from an image;

dividing said input image information into a plurality of image areas;

determining a compensating amount of image characteristic value with respect to each of said plurality of image areas;

evaluating a boundary characteristic of each of boundaries between said plurality of image areas, so as to output an evaluation result of said boundary characteristic; and

determining a boundary-compensating amount with respect to each of boundary areas in the vicinity of said boundaries, based on said evaluation result of said boundary characteristic evaluated in said evaluating step.

38. The method of claim 37,

wherein said image-compensation processing includes at least one of a gradation compensation of image signal value,

an image tone compensation for color image, a saturation compensation, a sharpness compensation and a granularity compensation.

39. The method of claim 37,

wherein said boundary characteristic of each of said boundaries is evaluated, based on a result of applying a multi-resolution conversion processing to said input image information acquired from said image.

40. The method of claim 37,

wherein said image-compensation processing includes at least one of a gradation compensation for image signal value, an image tone compensation for color image and a saturation compensation, and is applied to a low frequency band component, generated by applying a multi-resolution conversion processing to said input image information acquired from said image, at each level of its inverse-conversion operations.

41. The method of claim 39,

wherein said multi-resolution conversion processing is a Dyadic Wavelet transform.

42. The method of claim 37,

wherein said input image information, acquired from said image, represent a color image composed of a three-dimensional color space, and an operation of evaluating said boundary characteristic of each of said boundaries and/or said image-compensation processing are/is conducted, based on image information of at least one dimension on said three-dimensional color space, determined corresponding to contents of said image-compensation processing; and

wherein, with respect to said image-compensation processing, information of said dimension on said three-dimensional color space pertain to a brightness or a saturation of said color image, while, with respect to said operation of evaluating said boundary characteristic, information of said dimension on said three-dimensional color space pertain to a brightness, a saturation or a hue of said color image.

43. The method of claim 39,

wherein said image-compensation processing includes at least one of a sharpness compensation and a granularity compensation of image signal value; and

wherein said multi-resolution conversion processing is a Dyadic Wavelet transform.

44. The method of claim 43,

wherein said input image information, acquired from said image, represent a color image composed of a three-dimensional color space, and an operation of evaluating said boundary characteristic of each of said boundaries and/or said image-compensation processing are/is conducted, based on image information of at least one dimension on said three-dimensional color space, determined corresponding to contents of said image-compensation processing; and

wherein, with respect to said image-compensation processing, information of said dimension on said three-dimensional color space pertain to a brightness or a saturation of said color image, while, with respect to said operation of evaluating said boundary characteristic, information of said dimension on said three-dimensional color space pertain to a brightness of said color image.

45. An apparatus for conducting an image-compensation processing, comprising:

an acquiring section to acquire input image information from an image;

a dividing section to divide said input image information into a plurality of image areas;

a first determining section to determine a compensating amount of image characteristic value with respect to each of said plurality of image areas;

an evaluating section to evaluate a boundary characteristic of each of boundaries between said plurality of image areas, so as to output an evaluation result of said boundary characteristic; and

a second determining section to determine a boundary-compensating amount with respect to each of boundary areas in the vicinity of said boundaries, based on said evaluation result of said boundary characteristic evaluated by said evaluating section.

46. The apparatus of claim 45,

wherein said image-compensation processing includes at least one of a gradation compensation of image signal value, an image tone compensation for color image, a saturation compensation, a sharpness compensation and a granularity compensation.

47. The apparatus of claim 45,

wherein said evaluating section evaluates said boundary characteristic of each of said boundaries, based on a result of applying a multi-resolution conversion processing to said input image information acquired from said image.

48. The apparatus of claim 45,

wherein said image-compensation processing includes at least one of a gradation compensation for image signal value, an image tone compensation for color image and a saturation compensation, and is applied to a low frequency band component, generated by applying a multi-resolution conversion processing to said input image information acquired from said image, at each level of its inverse-conversion operations.

49. The apparatus of claim 47,

wherein said multi-resolution conversion processing is a Dyadic Wavelet transform.

50. The apparatus of claim 45,

wherein said input image information, acquired from said image, represent a color image composed of a three-dimensional color space, and an operation of evaluating said boundary characteristic of each of said boundaries and/or said image-compensation processing are/is conducted, based on image information of at least one dimension on said three-dimensional color space, determined corresponding to contents of said image-compensation processing; and

wherein, with respect to said image-compensation processing, information of said dimension on said three-dimensional color space pertain to a brightness or a saturation of said color image, while, with respect to said operation of evaluating said boundary characteristic, information of said dimension on said three-dimensional color space pertain to a brightness, a saturation or a hue of said color image.

51. The apparatus of claim 46,

wherein said image-compensation processing includes at least one of a sharpness compensation and a granularity compensation of image signal value; and

wherein said multi-resolution conversion processing is a Dyadic Wavelet transform.

52. The apparatus of claim 51,

wherein said input image information, acquired from said image, represent a color image composed of a three-dimensional color space, and an operation of evaluating said boundary characteristic of each of said boundaries and/or said image-compensation processing are/is conducted, based on image information of at least one dimension on said three-dimensional color space, determined corresponding to contents of said image-compensation processing; and

wherein, with respect to said image-compensation processing, information of said dimension on said three-dimensional color space pertain to a brightness or a saturation of said color image, while, with respect to said operation of evaluating said boundary characteristic, information of said dimension on said three-dimensional color space pertain to a brightness of said color image.

53. A computer program for executing an image-compensation processing, comprising the functional steps of:

acquiring input image information from an image;

dividing said input image information into a plurality of image areas;

determining a compensating amount of image characteristic value with respect to each of said plurality of image areas;

evaluating a boundary characteristic of each of boundaries between said plurality of image areas, so as to output an evaluation result of said boundary characteristic; and

determining a boundary-compensating amount with respect to each of boundary areas in the vicinity of said boundaries, based on said evaluation result of said boundary characteristic evaluated in said evaluating step.

54. The computer program of claim 53,

wherein said image-compensation processing includes at least one of a gradation compensation of image signal value, an image tone compensation for color image, a saturation compensation, a sharpness compensation and a granularity compensation.

55. The computer program of claim 53,

wherein said boundary characteristic of each of said boundaries is evaluated, based on a result of applying a

multi-resolution conversion processing to said input image information acquired from said image.

56. The computer program of claim 53,

wherein said image-compensation processing includes at least one of a gradation compensation for image signal value, an image tone compensation for color image and a saturation compensation, and is applied to a low frequency band component, generated by applying a multi-resolution conversion processing to said input image information acquired from said image, at each level of its inverse-conversion operations.

57. The computer program of claim 55,

wherein said multi-resolution conversion processing is a Dyadic Wavelet transform.

58. The computer program of claim 53,

wherein said input image information, acquired from said image, represent a color image composed of a three-dimensional color space, and an operation of evaluating said boundary characteristic of each of said boundaries and/or said image-compensation processing are/is conducted, based on

image information of at least one dimension on said three-dimensional color space, determined corresponding to contents of said image-compensation processing; and

wherein, with respect to said image-compensation processing, information of said dimension on said three-dimensional color space pertain to a brightness or a saturation of said color image, while, with respect to said operation of evaluating said boundary characteristic, information of said dimension on said three-dimensional color space pertain to a brightness, a saturation or a hue of said color image.

59. The computer program of claim 55,

wherein said image-compensation processing includes at least one of a sharpness compensation and a granularity compensation of image signal value; and

wherein said multi-resolution conversion processing is a Dyadic Wavelet transform.

60. The computer program of claim 59,

wherein said input image information, acquired from said image, represent a color image composed of a three-dimensional color space, and an operation of evaluating said

boundary characteristic of each of said boundaries and/or said image-compensation processing are/is conducted, based on image information of at least one dimension on said three-dimensional color space, determined corresponding to contents of said image-compensation processing; and

wherein, with respect to said image-compensation processing, information of said dimension on said three-dimensional color space pertain to a brightness or a saturation of said color image, while, with respect to said operation of evaluating said boundary characteristic, information of said dimension on said three-dimensional color space pertain to a brightness of said color image.